

REMARKS

This paper is responsive to a Non-Final Office action dated June 16, 2006. Claims 1-26 were examined. The abstract of the disclosure is objected to for including a phrase that can be implied. Claims 2 and 7 are objected to for including informalities. Claim 16 stands rejected under 35 U.S.C. 35 U.S.C. § 112, second paragraph. Claims 1-18 and 22-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,404,826 B1 to Schmidl et al. in view of U.S. Patent No. 6,771,628 to Söderkvist et al. Claims 19 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schmidl in view of Söderkvist and further in view of U. S. Patent No. 6,901,046 B2 to Hsu et al. Claims 20 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schmidl in view of Söderkvist and further in view of U. S. Patent No. 6,408,172 B1 to Alperovich et al.(hereinafter, “Alperovich”). Claims 21 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schmidl in view of Söderkvist and further in view of U. S. Patent No. 6,963,750 Cheng et al.

Specification

The abstract of the disclosure is objected to because it contains the phrase “[t]he present invention,” which can be implied. The abstract is amended to remove that phrase.

Claim Objections

Claims 2 and 7 are objected to for including informalities. Claims 2 and 7 are canceled.

Claim Rejections Under 35 U.S.C. §112

Claim 16 stands rejected under 35 U.S.C. 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 is canceled.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-18 and 22-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,404,826 B1 to Schmidl et al., (hereinafter, “Schmidl”) in view of U.S. Patent No. 6,771,628 to Söderkvist et al. (hereinafter, “Söderkvist”).

Claim 1 is amended to clarify the invention. Regarding amended claim 1, Applicant believes that Schmidl, alone or in combination with other references of record, fails to teach or suggest:

measuring a first received signal strength in individual ones of a plurality of segments within at least one time slot of a first frame in an interval and

calculating an average received signal strength for individual segments of the at least one time slot by averaging individual ones of the measured first received signal strengths of the first frame with the corresponding measured second received signal strengths of the one or more additional frames

as required by amended claim 1. Schmidl teaches that

frames are subdivided into sixteen equal time slots of 0.625 milliseconds each. Each time slot is further subdivided into equal symbol times. At a data rate of 32 thousand symbols per second (ksps), for example, each time slot includes twenty symbol times. Each frame includes pilot symbols as well as other control symbols such as transmit power control (TPC) symbols and rate information (RI) symbols.

Col. 1, lines 49-56. Schmidl further teaches sampling groups of pilot symbols from individual time slots, and producing an average of these pilot signals to produce an improved channel estimate. Col. 3, lines 60-67. Applicant respectfully disagrees that symbols of Schmidl are similar to the segments of claim 1, as implied by the Office action. However, assuming *arguendo* that the symbols of Schmidl are similar to the segments, as claimed, Schmidl teaches that groups of pilot symbols are averaged together, which fails to teach or suggest averaging individual ones of the measured first received signal strengths of the first frame with the corresponding measured second received signal strengths of the one or more additional frames, as required by amended claim 1.

Söderkvist fails to compensate for the shortcomings of Schmidl. Söderkvist teaches calculating an average of the received signal strength for each segment defined by a selected segment size over the entire timeslot period and calculating an average over a selected part of the timeslot period. Col. 3, lines 24-45. Nowhere does Söderkvist teach or suggest calculating an average received signal strength for individual segments of the at least one time slot by averaging individual ones of the measured first received signal strengths of the first frame with the corresponding measured second received signal strengths of the one or more additional frames, as required by amended claim 1.

For at least these reasons, Applicants respectfully maintain that claim 1 distinguishes over Schmidl and all references of record. Accordingly, Applicants respectfully request that the rejection of claim 1 and all claims dependent thereon, be withdrawn.

Claims 19 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schmidl in view of Söderkvist and further in view of U. S. Patent No. 6,901,046 B2 to Hsu et al. (hereinafter, “Hsu”). Claims 19 and 24 are canceled.

Claims 20 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schmidl in view of Söderkvist and further in view of U. S. Patent No. 6,408,172 B1 to Alperovich et al. (hereinafter, “Alperovich”). Claims 20 and 25 are canceled.

Claims 21 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schmidl in view of Söderkvist and further in view of U. S. Patent No. 6,963,750 to Cheng et al. (hereinafter, “Cheng”). Claims 21 and 26 are canceled.

Additional Remarks

Claims 2, 7-11, and 15-26 are canceled.

Claims 3-6 and 12-14 are amended consistent with amendments to claim 1 and to clarify claim language.

New claims 27-40 are added. New claims 27-30 are directed to additional limitations of the method of claim 1, which Applicant believes is allowable over the art of record, and Applicant believes new claims 27-30 are allowable for at least this reason.

New claims 31-37 are directed to an apparatus for estimating interference on a channel. Applicant believes that the art of record fails to teach or suggest a receiving device configured to

calculate an average received signal strength for individual segments of the at least one time slot by averaging individual ones of the measured first received signal strengths of the first frame with the corresponding measured second received signal strengths of the one or more additional frames,

as required by new claim 31. For at least this reason, Applicant respectfully maintains that new claim 32 distinguishes over all references of record.

New claims 32-37 are directed to additional limitations of the apparatus of claim 31, which Applicant believes is allowable over the art of record, and Applicant believes new claims 33-38 are allowable for at least this reason.

New claims 38-40 are directed to an apparatus. Applicant believes that the art of record fails to teach or suggest means for estimating at least one interference level based at least in part on average received signal strengths, the estimating comprising:

calculating an average received signal strength for individual segments of the at least one time slot by averaging individual ones of the measured first received signal strengths of the first frame with the corresponding measured second received signal strengths of the one or more additional frames,

as required by new claim 38. For at least this reason, Applicant respectfully maintains that new claim 39 distinguishes over all references of record.

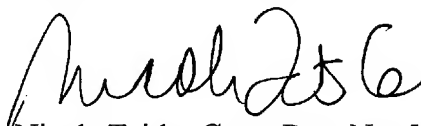
New claims 39 and 40 are directed to additional limitations of the apparatus of claim 38, which Applicant believes is allowable over the art of record, and Applicant believes new claims 40 and 41 are allowable for at least this reason.

In summary, all claims are believed to be allowable over the art of record, and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

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Respectfully submitted,



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